

PSYCHOANALYTIC RESEARCH: PROGRESS AND PROCESS
NOTES FROM ALLAN SCHORE'S GROUPS IN DEVELOPMENTAL
AFFECTIVE NEUROSCIENCE AND CLINICAL PRACTICE

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Within the human sciences, psychoanalysis, with its emphasis on the development and maintenance of early attachment bonds of social-emotional communication, now provides the most comprehensive model of the origins of the essential capacity to enter into relationships with other humans. Advances in developmental psychoanalysis now clearly indicate that just as the infant-mother attachment relationship is fundamentally a psychobiological dyadic system of emotional communication and affect regulation, this same system mediates the essential processes that adaptively sustain all later intimate relationships, including the marital relationship. In converging work, neuropsychanalysis and neuropsychiatry are now describing how early disturbances in object relations negatively impact the brain structures that process interpersonal and regulate intrapersonal information. And with the shift in clinical psychoanalysis into a relational perspective, therapeutic models are being generated for the more effective treatment of not just symptoms of individual psychopathologies, but also deficits in sustaining satisfying intimate relationships with others. Updated attachment theory, which is currently incorporating data on brain development

from neuroscience, is thus a potential source of more complex models of marital therapy.

Just as developmental psychoanalytic models show a commonality of interactive regulatory mechanisms within the infant-mother and all later intimate relationships, recent psychoneuroendocrinological research clearly demonstrates that interactive regulation of stress regulating hormones occurs within the attachment relationship (Gunnar & Donzella, 2002) and within adult social relationships (Seeman & McEwen, 1996). In light of the fact that the central relationship for most adults is marriage, a significant focus of basic research is the investigation of the fundamental mechanisms that underlie optimal and dysfunctional marital relationships. These essential nonverbal processes are currently being explored in psychobiological studies of how interactive stress amplifies or reduces psychophysiological linkages within marital relationships (Robles & Kiecolt-Glaser, 2003), and how positive social bonds and caring relationships deactivate the stress regulating hypothalamic-pituitary-adrenal axis and thereby reduce autonomic arousal (Uvnas-Moberg, 1997).

In total, this interdisciplinary work indicates that troubled marriages are characterized by not only more conflict and stress, but also by an inability of the relationship to physiologically recover from repeated negative and hostile interactions. The resulting significant alterations in stress hormone levels that accompany unrepaired intense negative affective states can lead to chronic

elevations in cardiovascular activity and dysregulation of immune functions, and thereby negative influences on the health of both members of the marital dyad.

This experimental research on the fundamental nonverbal psychobiological mechanisms that underlie the interpersonal processes embedded within dysfunctional marital relationships is paralleled by current psychiatric studies of pathogenic marital interactions. Workers in this area are beginning to incorporate current information from developmental psychoanalysis and attachment theory into treatment models (Lewis, 2000). However, these newer models of marital therapy have not yet addressed very recent psychoanalytic knowledge that describes the implicit, unconscious, object relational communication of negative affect within intimate dyads, nor current data on right brain systems that process and regulate stressful interpersonal information.

The contributions in this month's column represent brief outlines of recent work in this area from members of my study groups. Each builds upon advances in developmental psychoanalysis on the neurobiology of attachment and in neuropsychoanalysis on the role of the right brain in affect communication and regulation. In the opening two-part article, Sondra Goldstein and Susan Thau review conceptions of marital relationships through the lens of attachment theory, and then update this with a model of how right brain mechanisms, structurally impacted by early attachment experiences, are activated in dysregulating stressful marital interactions. In a second section they outline a novel

neuropsychobiological approach to the treatment of the deficits in emotional communications and dysregulated affect states that are frequently encountered in couples seeking treatment, including a brief clinical vignette.

In a complimentary paper, Stan Tatkin brings into focus the critical role of the marital dyad's co-regulation of each others autonomic nervous system (ANS), and the detrimental effects of marital instability on the hyperactivation of their hypothalamic-pituitary-adrenal axis (HPA). He then describes the right brain mechanism of social-emotional cueing, and the therapist's critical function of attending to nonverbal cues and shifts of arousal within the dyad. Although others have stressed the important role of the nonverbal domain in psychoanalysis, Tatkin's work represents a deeper appreciation of the role of the body in psychoanalysis.

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ATTACHMENT THEORY, NEUROSCIENCE, AND COUPLE THERAPY
PART I: INTEGRATING ATTACHMENT THEORY AND NEUROSCIENCE IN
UNDERSTANDING COUPLE RELATIONSHIPS

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Attachment theory was originally developed by John Bowlby (1969) to describe patterns of infant-caregiver interaction. Currently, there is growing recognition that the quality of a person's attachments in childhood is intimately linked with patterns of interpersonal relatedness throughout life. Applied to adult relationships, attachment theory provides a theoretical framework for understanding adult couple relationships, and a valuable perspective for assessing and treating couples. Couple therapy from an attachment perspective shifts the focus of treatment from the security of the individual to the security of the couple relationship. Central to a couples' sense of security is the ability to effectively regulate affect within the relationship. From neuroscience (Schoore, 2003) comes evidence that attachment is a regulatory theory with implications for interactive affect regulation in dyads. In this two-part contribution we will elaborate on first on the integration and then on the application of attachment theory and neuroscience in treating couples.

ATTACHMENT BEHAVIORS IN THE INFANT-CAREGIVER AND COUPLES RELATIONSHIPS

In applying attachment theory to couple relationships, parallels are found between the defining features of infant-caregiver attachment behavior and adult couple attachments. Bowlby (1969, 1973) proposed that attachment behavior is defined by (1) proximity seeking, (2) safe haven behavior, (3) separation distress, and (4) secure base behavior. All of these features of infant-caregiver bonds may be observed in couple relationships in which partners derive comfort and security from each other. These behaviors are particularly manifest in periods of external or internal stress within the relationship, such as when one partner threatens to be physically or emotionally unavailable, thereby eliciting protest from the other. The primary change in attachment relationships from infant-caregiver to adult romantic bonds is that the asymmetry of early bonds is replaced by more symmetry and mutuality in adult attachments. An additional differentiating feature is sexuality in adult attachments.

Adult styles of relating to primary attachment figures parallel the attachment styles identified in infant-caregiver relationships. The research of Hazan and Shaver (1987) presented groundbreaking evidence that the three major childhood attachment styles (secure, insecure-avoidant, and insecure-ambivalent) are also found in adult romantic relationships. These authors reported that secure adults described their romantic relationships as positive, trusting, supportive, and friendly; their relationships lasted longer than those of insecure-avoidant or insecure-ambivalent adults. Insecure-avoidant adults had relationships characterized by fear of intimacy and closeness, while insecure-

ambivalent adults had relationships characterized by obsession, jealousy, and worry about abandonment.

Attachment styles can also be viewed in terms of the answer to the question "Can I count on this person to be there for me if I need them?" (Hazan and Zeifman, 1994). If the answer is "Yes" in a positive, secure way, the partners feel confident that they may rely on each other, have open communication, and experience a flexible, mutually cooperative relationship. If the answer is "Maybe," partners tend to have an insecure-anxious style, with vigilance about loss, and alternating clingy/angry demands for reassurance. If the answer is "No," the partner's past history of abuse or neglect may have left no hope for a secure relationship. In the resulting insecure-avoidant attachment style, the partner avoids closeness or dependency, denies the need for attachment, and views others with mistrust.

Hazan and Shaver's findings are consistent with Bowlby's hypothesis (1982) that children develop internal working models about relationships. These relatively stable concepts are implicit, nonconscious guides for later adult attachment relationships. Internal working models guide the child's, and later the adult's perceptions "of how the physical world may be expected to behave, how his mother and other significant persons may be expected to behave, how he himself may be expected to behave, and how each interacts with the other" (Bowlby, 1973). According to Kobak and Sceery working models are "styles of affect regulation" which are utilized as "strategies for regulating distress in

situations that normally elicit attachment behaviors" (1988, p. 136). With important implications for psychotherapy, Bowlby (1969) also hypothesized that childhood attachment patterns could change later in life as a result of new emotional experience combined with the development of new mental representations of attachment relationships, i.e. internal working models may be altered and "updated."

NEUROBIOLOGY OF ATTACHMENT MECHANISMS IN ADULT ROMANTIC RELATIONSHIPS

Additional understanding of attachment relationships is found in neuroscience, which provides information about the essential brain structures that mediate attachment processes. Schore (2001) views attachment as fundamentally the interactive regulation of emotion, specifically the right brain-to-right brain regulation of biological synchronicity between psychobiologically attuned organisms. Right-to-right brain affective transactions, mediated by face-to-face mutual gaze, prosody, and tactile communications, regulate optimal arousal and promote the attachment bond between infant and caregiver. Early emotional regulation established via infant-caregiver synchrony, leads to the organization and integration of neural networks and eventual self-regulatory capacity in the child. In this manner the infant utilizes the interactive presence of an attuned mother to learn to regulate emotions.

Attachment experiences directly influence the wiring of the right hemisphere into the limbic system, the brain network that assesses information in terms of feelings that guide behavior. The right hemisphere plays a central role in

the rapid, nonconscious appraisal of the positive or negative emotional significance of social stimuli. In addition, this hemisphere is dominant for the perception of nonverbal emotional expressions in facial or prosodic stimuli, nonverbal communication, processing bodily based visceral stimuli, implicit learning, and for affect regulation. The rapid, nonconscious assessment of negatively charged social stimuli by the right hemisphere via the limbic system often underlies triggering of dysregulating affect patterns in couple relationships.

Right brain-to-right brain communications between mother and infant generate internal working models that encode strategies of affect regulation and guide interpersonal behavior. These attachment schemas become implicit, nonconscious procedural memories that are later evoked in interpersonal experiences, particularly attachment relationships. Attachment schemas guide in the selection of significant others and influence the emotions experienced within relationships. “This attachment dynamic, which operates at levels beneath awareness, underlies the dyadic regulation of emotion” within a couple relationship (Schorer, 2000). When an attachment schema is severely challenged or the attachment bond is breached, these events may lead a couple to seek treatment. Because the attachment system evolved to promote physical proximity and increase felt security when individuals are threatened, vulnerable, or distressed, it is particularly activated by fear provoking situations.

DEFICITS IN EMOTIONAL COMMUNICATIONS AND DYSREGULATED AFFECT STATES IN DYSFUNCTIONAL COUPLES

For instance, a couple may seek therapy when their partnership becomes stressed by a life crisis or conflict which diminishes their experience of the relationship as a safe base. When partners no longer effectively act as emotional regulators for each other, cycles of fear and shame may erode the foundation of their relationship. Deficits in emotional communication and dysregulated affect states often lead couples to treatment. In such treatment, an understanding of the partners' attachment styles, their internal working models of relationships, and related patterns of affect regulation provide an important perspective for understanding the couple process as well as the underlying attachment disruption that created the need for couple therapy.

The couple therapist typically sees only certain combinations of attachment styles in partners seeking treatment. The attachment style combinations which are more often seen in couples are insecure-anxious with insecure-avoidant, secure with insecure-avoidant, or secure with insecure-ambivalent. Since they are not free of conflict or less subject to life or developmental crises, secure-secure couples may also seek conjoint therapy. The nature of the attachment pairings in couples is a primary determinant of stability, or instability of the dyad. Just as the attachment relationship in infancy develops from countless interactions with the caregiver, adults also require repetitive interactions of the secure base type for a romantic partnership to develop into a secure attachment relationship. Couple therapy from an attachment-neuropsychobiological perspective focuses on repetitive verbal and

nonverbal patterns of interaction associated with regulated and dysregulated affective states. The goal of couple therapy from this perspective becomes understanding the role of attachment schemas in both emotional communication and affect regulation, with the goal of establishing (or re-establishing) a more secure base within the dyad where both effective affect regulation and emotional communication can occur.

PART II: APPLICATION OF ATTACHMENT THEORY AND NEUROSCIENCE TO TREATMENT OF COUPLES

Couple therapy has traditionally been associated with building communication skills as a means of increasing intimacy between partners. But frequently, this approach does not create lasting improvement. Without fully understanding their habitual patterns of affect dysregulation, couples may relapse into patterns of conflict that become increasingly destructive. Couple therapy from an attachment perspective is concerned with each partner's internal working models of relationships as well as the partner's own pattern of affect regulation. As the couple explores these patterns and processes created interactionally, there is often a greater sense of commitment and a sense of shared partnership which contributes to building a more secure foundation.

INTERACTIVE AFFECTIVE PROCESSES AS A FOCUS OF COUPLE THERAPY

The newly emerging field of developmental affective neuroscience, with its road map of how emotional patterns develop within attachment relationships (Schore, 1994, 2003), provides a window into the interactional patterns of intimate relationships. In attachment-oriented treatment the therapist is committed to creating an environment (Clulow, 2001) in which partners can explore their own attachment schemas and patterns of affect regulation with particular emphasis on cues that signal the presence of unconscious implicit memories (Schore, 2003). This approach is committed to establishing treatment as a safe and secure base, and in such an environment there is a greater likelihood of having reparative experiences, creating the possibility of new neuronal integration (Cozolino, 2002).

As mentioned previously the mechanism of attachment, in any dyadic system, represents the interactive regulation of emotion. Generally couples seek treatment when there is frequent and intense relational disequilibrium, and one or both are too often dysregulated in their efforts to relate to each other. The partners first depend upon the therapist to provide the affect regulation that has been eroded by unrepaired continuing conflict. There is hope that by deepening each partner's understanding of the other, by becoming aware of each other's verbal and non-verbal cues, and by gaining an appreciation of their own altered levels of arousal, the partners will become more adept at interactive affect regulation, thereby strengthening the security of their attachment bond.

Through repetitive interactions in treatment, the partners gain the ability to become aware of and describe their own emotional experience leading to

emotional literacy. They learn to appreciate both verbal and non-verbal communication, including the multitude of signals that are bodily and viscerally based. By becoming emotionally sensitive, each partner learns to pay close attention to his own visceral changes and to be curious about what these bodily signals may mean in identifying nonconscious emotions.

While balance and harmony are valued, the couple also gains experience in tolerating moments of misattunement as well as the idea that conflict is a normal part of any intimate relationship, reflecting the differences between the two partners (Gottman, 1991). Without minimizing the pain of disappointment, partners gain flexibility by developing ways to manage their feelings of disengagement during times of disruption. Often neither partner has experienced particular negative emotions as tolerable or understandable. Thus, when there is an attachment breach, a cycle of shame is triggered with one partner feeling that he is being held responsible by the other for being unreasonable and demanding. Couples become aware of how the intense state of interactive dysregulation is maintained by both partners and how this dysregulated state can undermine their bond if not interrupted by more reparative approaches. When conflictual feelings are seen as a normal part of a couples' interaction, then each can be more interested in what is being activated within themselves that may be contributing to their interactive stalemate. Each partner is encouraged to learn how to self-regulate. By deepening the understanding of his own internal conscious and

nonconscious systems, each partner has a greater capacity to explain his emotional state, and needs related to these emotions.

The concept of neuropsychobiological cycles provides a way of examining rapidly occurring automatic nonconscious appraisal of danger and frightful stimuli. These automatic cycles which occur at a subcortical level of the brain can be slowed down when conscious thought and language are used to interrupt this rapid fear cycle (Cozolino, 2002). By emphasizing the neuropsychobiological basis of these rapid occurring automatic emotional responses, there is often a normalizing of these conflictual states since partners can appreciate the origin and nature of fearful and/or shameful reactions that are being simultaneously evoked. The emphasis in couple treatment is on affect regulation which allows the shame based sequences filled with negative affects to shift into states of equilibrium and calmness where each partner can feel heard (Schore 1994, 2003). The very act of committing to engage in this examination of fearful moments is, in and of itself, a central part of the healing process of repair. This includes the creation of a shared narrative about the couple's history and manner of emotional processing (Siegel, 1999). From a neuropsychobiological perspective, the dysfunctional right brain-to-right brain transactions between the two partners (Schore, 1994, 2003) are replaced with more balanced and considered transactions involving partners who are no longer engaged in unconsciously traumatizing each other. Being capable of navigating these lapses in connection actually creates resiliency and hope as part of the foundation of the

partnership. All of this is fundamental to the creation of a secure base in which each partner can experience his emotional needs, with a sense of well being and feeling loved.

CLINICAL VIGNETTE OF A MOMENT OF MISATTUNEMENT

Conjoint therapy with Sue and John offers an opportunity to examine the principles in an actual treatment sequence, applying these concepts from attachment theory and neuroscience. Sue and John sought couple therapy because they were having frequent crises regarding their profession as university professors. During one session, Sue became extremely upset about her overwhelming responsibilities, at home and at the university. She told John that she felt very alone with the enormity of her burdens. As she spoke her voice escalated and within a millisecond she was yelling at John who sat passively in his chair staring straight ahead. Watching him for some sign of recognition and finding none, she became even angrier and more rageful, yelling at him “You are useless and I can’t take it any more.” John grimaced and turned away. Sue saw this and bit her lip, fighting back her rage which turned to tears.

This brief moment of misattunement and interactive dysregulation is an example of the rapid cycle of fear and anger that becomes a regularly enacted pattern when each partner’s insecurity is being repetitively triggered by both verbal and nonverbal cues. Sue’s bid for connection and interactive regulation was thwarted when she looked intently at her husband’s face for some sign of interest and attention. She explained later that his face seemed blank. His

seeming lack of response to her pain, his blank unemotional expression, triggered her sense of abandonment. Sue's unconscious memories based on early neglect left her vulnerable to moving into states of disruption when she read her partner's face and body posture as being dismissive and disregarding. This moment which occurred in a millisecond represented a whole lifetime of degrading, dismissive experiences at the hands of another.

The therapist's intervention was to help slow down this rapidly occurring cycle by helping Sue identify what she felt had happened to her. By doing this, Sue's reaction was seen in a larger context, related to her history and what John's behavior meant to her. John had never thought of his actions as being provocative and a source of dysregulation for Sue. To the contrary, he believed that by becoming quiet and silent, he was preventing Sue from becoming angrier and more upset. He was surprised to learn that it was actually his quiet withdrawal that was exacerbating this cycle. In the safety of therapy, this couple began to explore their own patterns of fear and withdrawal that had undermined their efforts to attach. They became aware of visual and verbal signals that were personally frightening - his blank expressions, her tone, his clinched teeth, her pointed finger.

The goal of couple therapy applying neuropsychobiological principles is to explore and identify the verbal and nonverbal, as well as conscious and nonconscious interaction patterns of affect regulation that are the basis of either enhancing or diminishing attachment security between the partners. The work of

therapy is to then “replace silent, unworkable intuitions with functional ones” (Lewis, Amini, & Lannon, 2002). This therapeutic approach allows greater consideration of the dominant right hemisphere’s rapid nonconscious automatic appraisal of emotional stimuli by the linguistically-based and conscious left hemisphere. Recognition of this important hemispheric duality allows us to function more adaptively by creating the possibility of better affect regulation and more secure attachment relationships.

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A DEVELOPMENTAL PSYCHOBIOLOGICAL APPROACH TO COUPLE THERAPY

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Traditional forms of couple therapy largely ignore, or do not account for the psychobiological substrates that bring people together and drive them apart. Systems, cognitive-behavioral, and psychoanalytic models do not fully take into account the moment-by-moment interaction of mind, brain, and body within a two-person psychobiological system. The working hypothesis of this short paper is that partners in a romantic relationship rely upon one another for regulation of their autonomic nervous systems, and this dependency has its roots in the earliest of relationships, the mother-infant attachment system.

NEUROBIOLOGY AND REGULATION OF THE MOTHER-INFANT RELATIONSHIP

From the very beginning, we depend upon an external regulator for our basic psychobiological needs. It is through this interactive regulatory system that we first learn to be with another person and then with ourselves. In the secure mother-infant dyad, the mother is regulating the infant's developing autonomic nervous system and providing the stimulation necessary for the experience-dependent maturation of the infant's social-emotional, psychoneurobiological system (Schore, 2002a, 2002b). Somatosensory stimulation, through face-to-

face, skin-to-skin interaction, is via visual, auditory, olfactory, gustatory, and vestibular processes. Within this secure relational system begins the planting of seeds necessary for social-emotional development, such as capacities for trust, empathy, love, playfulness, humor, patience, creativity, and vitality. Here in the interrelational orbit of secure attachment, injuries are born, acknowledged, and repaired. Together, mother and infant maneuver up and down a full bandwidth of arousal and affective states in an infant-led orchestration of engagement and disengagement, stimulation and quiescence, expansion and contraction, gaze connection and gaze aversion.

Attachment is not only the generation of cognitive internal working models; it is also the dyadic regulation of arousal and emotion (Bowlby, 1988; Schore, 1994). The developing social-emotional system largely involves the infant's right hemisphere, which has deep connections into the limbic system and body. The right hemisphere is dominant for gaze, non-verbal communication, processing of emotional communication, and processing of the somatic aspects of communication. The right hemisphere dominates during overwhelming stress and activates the hypothalamic-pituitary-adrenal axis (HPA) and production of stress hormones (cortisol) (Sullivan & Gratton, 2002).

Synchronous communication between mother and infant is a right hemisphere-to-right hemisphere, nervous system-to-nervous system process, and this sets the stage for later development of the right orbitofrontal cortex (OFC), an area known to play a major role in affect regulation and other

executive functions. The synchrony of the secure mother-infant dyad modulates the intensity and duration of sympathetic (high) and parasympathetic (low) activation. This continuous interactive regulation of arousal provides a dynamic dyadic container that is contingently responsive, and based in a mutuality that attracts involvement as opposed to cultivating aversion or indifference to it, which may lead to a bias toward autoregulation.

In the secure mother-infant relationship, and in the stable adult romantic relationship, right brain-to-right brain interactive regulation is the preferred means of stimulation and soothing (over autoregulation) and this jointly created capacity underlies the dyad's ability to amplify positive emotions and to attenuate rather than dismiss negative emotions.

NEUROBIOLOGY AND REGULATION OF THE ADULT ROMANTIC RELATIONSHIP

Like the mother-infant "couple," stable adult romantic couples create a mutually habitable psychological space that allows voluntary engagement with the other for pleasure, calming, safety and security and disengagement without consequence.

As adult romantic partners become closer and more familiar, they begin to function as a *regulatory team*, depending upon one another for regulation of each other's autonomic nervous system. Each couple forms a unique, intersubjective dyad, with its own unique regulatory capacities. Their stability as a couple

depends on their ability to regulate interactively across their potential bandwidth of arousal. Though they operate as a unit, each partner brings his and her own regulatory capacities to the relationship. However, regardless of their individual histories, success or failure of the couple based on personal history alone is not entirely predictable.

A leading cause of marital instability is chronic hyperactivation of the hypothalamic-pituitary-adrenal axis (HPA) and sympathetic over-arousal and/or parasympathetic under-arousal, as partners experience an extreme psychobiological shift in the organization of here-and-now experience. In moments of severe stress, individuals and the dyad itself can move either fight, flight or freeze, or into conservation withdrawal, a massive parasympathetic drop into a deadening state of dissociation, collapse and hopeless surrender, with prevailing feelings of intense shame, annihilation, and fragmentation. The result is a breach in the attachment system that resonates implicitly with early experiences of disruption in the mother-infant system. The dyad becomes unstable and uninhabitable thus forcing each individual to turn to their given strategies for re-regulating their internal state. For example, a problem arises when one partner turns toward autoregulation for self-organization and down-regulation of arousal while the other requires interactive regulation to achieve the same. The result is a couple that cannot calm down and repair injuries.

Successful couples are able to limit and modulate dyadic arousal states, avoid emotional flooding, and maintain a relatively high degree of emotional

connectedness, friendship and goodwill. They are able to hold one another within the relational orbit due to their capacity to generate considerably more positive than negative mutual experience, and in conflict, to override negative feelings with positive ones (Gottman, 1994). By doing so, they can engage one another, even in conflict, with the confidence that they will not fall into a prolonged state of mutual dysregulation. Couples who are unsuccessful at this will have fewer and shorter periods of enjoyed mutuality and more moments of disengagement as a response to conflict.

SOCIAL-EMOTIONAL CUEING

Because implicit social-emotional (SE) cues are rapidly processed by the limbic system and right hemisphere, partners respond instantly to subtle affective shifts expressed in the face, voice, and body posture of the other (Schoore, 2002b). For instance, partner A is able to read partner B's immediate emotional reactions faster than partner B can "know" and verbalize them. Under non-stressful circumstances, with individuals possessing good SE development, this SE cueing seems to be *the* mechanism of interactive regulation, attunement, and reflective functioning. A common symptom of couple distress is gaze aversion by one or both partners. The purpose of gaze aversion, ostensibly, is to down-regulate arousal, but a problem occurs with sustained gaze aversion. The loss of eye contact disrupts the couple's ability to provide contingent responses to one another, based on real-time data flow emanating from subtle shifts in facial

expression and pupil dilation. Continuous dropping of eye contact promotes autoregulation and non-contingent response based on internal object representations.

The right orbitofrontal cortex (OFC) provides error correction in SE cueing. However, in the presence of sympathetic (hyperaroused) or parasympathetic (hypoaroused) conditions, the OFC goes offline leaving a subcortical appraisal system to regulate via verbal and non-verbal means. In this state, partners revert to their internal working models and primitive part-object relations (Bowlby, 1988; Kernberg, 1985). This can be problematic for the therapist whose own ability to self-regulate within optimal range is challenged and the likelihood of countertransference acting-out increases. Yet it is in this mental/emotional state that treatment is most effective. During periods of arousal and affect dysregulation within the couple system, the therapist can make powerful advances toward interactive repair of early-encoded relational traumata and its sequelae. The therapist, in order to help the couple, must function as an external “OFC” for the dyad and must be able to achieve this in the face of intense affect, dysregulated arousal, and primitive defense.

The first order of couple therapy should be the management of acute or chronic dysregulation within the couple system. The therapist should focus interventions designed to help couples regulate intensely high and low arousal states *while they occur*. Sometimes this is a matter of expanding their tolerance of *intensity*, or managing sudden spikes in intensity. At other times, it is a matter

of modulation, in which the couple, as a regulatory team, is unskillful at managing the *duration* of intense hyper or hypoarousal. The therapist can help by microfacilitating each partner's immediate awareness of his or her somatosensory experience, which slows the couple's pace and bring the couple back into a social engagement system (Porges, 2001). It should be kept in mind that the average person requires a minimum of 20-30 minutes to recover from DPA (Gottman, 1994; Kiecolt-Glaser et al., 2003). The therapist should also pay special attention to the couple's injury/repair response time. In this work, the content is background to the process of interactive regulation, or lack thereof.

This regulatory model strongly suggests that fundamental to the clinician's understanding as to why some couples thrive and others fail are the developmental, psychobiological substrates that motivate engagement and disengagement. This perspective, which includes identifying and tracking a couple's regulatory strategies, can provide the clinician with a useful therapeutic approach that may increase the success of clinical intervention.

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